

the first section of the Inter-American Highway to be completed in Mexico at a formal opening which began with ceremonies in the center of the international bridge at Laredo, Texas, and included the trip over the highway by about 55 cars of the official party, frequent celebrations in cities along the way, and a very elaborate program of civic activities in Mexico City. The length of the Laredo-Mexico section is approximately 765 miles. South of Mexico City, about 160 miles have been completed, and surveys have been started at the Guatemala frontier for further work by the Mexican Government.

THE MOTOR AND THE HIGHWAY IN MODERN TRAFFIC

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When the historian writes the story of the twentieth century and sees what is happening today with that perspective which comes only with the passing of time, it is a fair guess that he will set down as the outstanding technical development of the first quarter of that century the advent of motor transport.

In saying this, I am quite aware that we have been presented, by the scientist and technician during the last 25 or 30 years, with many other marvels—for example, the radio and all that series of developments that depend on the electronic principle. But those still are in their infancy; we have yet to see clearly what they all will mean to us in terms of social and economic values.

But motor transportation today is approaching maturity. It is approaching the fullness of its powers and the fulfillment of its promise, and that is why I ascribe to motor transportation first place in the technical developments of the last 25 or 30 years.

To get some idea of the magnitude of this function and of the speed with which it has become a major feature of the modern scene, we need recall only the fact that in 1900 there were only about 8,000 automobiles in the United States, while today there are more than 26,000,000. So it is distinctly the achievement of the first quarter of the twentieth century to have set up this effective, flexible, and almost universal transportation agency.

EFFECTS OF MOTOR TRANSPORT

Probably it is unnecessary to dwell on the social aspects of this innovation. They must be obvious to every thoughtful observer. It is the motor car that has opened up, through in-

tensive development, new areas, both rural and suburban; that has wrought upon the everyday life and the viewpoint of millions of our citizens an all but revolutionary change. This is so because it has made available to everyone in some measure a new mobility by means of cheap, flexible, and individual transportation.

But it is not only on the social side that motor transportation has effected noteworthy reforms; our economic life also has felt its imprint.

Needless to say, the same agency that has so affected our social fabric has helped to develop new trading areas and new trade relationships throughout the country. It has loosened the grip on producers, shippers, and consumers alike of a transportation monopoly of generations of standing; in so doing it has helped to rejuvenate other modes of transportation far beyond what could have been accomplished by public regulation alone. It is quite possible that public regulation had reached the point at which it had become more of a burden than a help to other forms of transportation and to the general community.

While some of our railroad friends may be somewhat restive today under the competition of motor transportation, I am confident that they yet will bless the day that highway transport put to them the spur of competition. Already it is leading to great improvement in railroad service, both passenger and freight, and already our people are reacting favorably to the improvement both as passengers and as shippers.

More directly, motor transportation has created vast, new, wealth-producing industries that have added substantially to the national economy and that must be credited with much of the material progress of the last quarter century.

DEVELOPMENT OF THE HIGHWAY

Motor transportation, as we now understand it, is the fruit of a combination of three technical achievements: the internal combustion engine, the pneumatic tire, and the improved highway. Each of these is essential, but we are concerned here only with the development of the highway, the track that makes possible the widespread and efficient application of the other two.

With the advent of the crude automobile or horseless carriage of the late nineties, highway improvement entered on its first phase. We called it the "Good Roads Era." Its watchword was, "Get America out of the mud." This movement reached its height soon after the turn of the century. It is significant that the American Road Builders' Association was founded in 1902.

In those days, road building involved no question of refinement in economics, engineering, or administration. No one

knew a great deal about how to design or build the modern highways required for the new type of transportation. The question was one of getting some kind of surface on the old roads over which one could drive an automobile with reasonable certainty of getting through.

In order to understand the present problems of highway improvements, we must take a backward look as far as that period; we must see what has happened since the good roads era. We must remember that this highway improvement program, relatively speaking, is a matter of "the day before yesterday."

Most of our problems result from the rapidity with which motor transport has developed and our difficulty in keeping our highway facilities abreast of the needs of the vehicle.

In the beginning, we had no science of highway engineering; no special skill in construction; no profound knowledge of materials and their qualities; no equipment or machinery with which to build efficiently. But despite all that, the need was so urgent, the demand so pressing, that our communities and their officials somehow contrived to get some kind of road for the new vehicle. All honor to those who pioneered the "Good Roads" movement. And in considering our present problems, let us not forget that the amazing progress initiated by them has been made in a very brief period of our history.

U. S. BUREAU OF PUBLIC ROADS—FEDERAL AID

Then came the various steps in real highway development. With increasing interest on the part of the federal government, we had Federal Aid and the establishment of the Bureau of Public Roads. Through these agencies, a tremendous impetus was given to sound technical progress. It is no disparagement of the splendid work that had already been done by some state highway departments prior to 1916, to say that a most significant turning point in highway improvement was the entrance of the federal government. The Bureau of Public Roads with its powerful weapon—Federal Aid—was able to do much for better coordination of routing, for research, and for the establishment of advanced standards of practice, construction, and inspection. I believe that that particular development probably had much to do with keeping this new public facility out of the pork-barrel and log-rolling class, into which it might easily have slipped at that stage of its development. That was a worthy and vital job. Every citizen of every state should know that, because of the influence thus exerted by the federal Bureau of Public Roads, the trifling sum dispersed from the federal treasury each year returns itself to him many times over and to all of his fellow citizens.

IMPROVING PRACTICE

Along with this administrative progress came the period of rapid development in engineering and construction practice. We began to develop a corps of highway engineers. I was impressed at our recent meeting when Professor Steinberg of the University of Maryland reported that more than 150 engineering schools throughout the country having highway engineering courses now are affiliated with the Educational Division of the American Road Builders' Association. Turn your mind back a generation and ask how many engineering schools then recognized highway improvement as an important branch of engineering. Since then, we have seen not only a truly remarkable development in highway design, technical research, maintenance and construction technique, but also the growth of thousands of highly qualified contracting organizations and the invention and adaptation of new materials, machinery, and equipment to meet the special needs of modern highway construction and maintenance.

During that period, we began also to improve financing practice. Amongst other devices, we provided means by which the direct users of the highways could make a contribution toward the cost of improving and maintaining them. When Oregon adopted her one-cent gasoline tax for highway improvement, we took one of the most forward steps, not only in highway administration, but also in sound taxation. We accepted the principle that we would charge the user for an appropriate share of the cost of rendering him a specific but universally used public service. During recent years that principle has been frightfully abused, but nevertheless the establishment of a means by which the direct user should pay a fair share of the cost of providing and maintaining the highways marked a forward step.

With the coming of the depression we saw change in many elements of this picture. We saw the highway-improvement function to a substantial degree seized upon as a means of providing emergency employment for many who were unable to find work at their normal occupations. Highway improvement became an unemployment relief agency, and that change has had its effect upon this picture of progress. In my judgment that change has much to do with some of the specific problems that confront us today and will continue to confront us during the next five or ten years. It may have more influence than any other single problem, except, possibly the wholesale misappropriation of the highway revenue.

WILL PROGRESS IN HIGHWAY DEVELOPMENT BE RESUMED?

Today, then, we are standing at a crossroads. We have come thus far by the normal processes of progress. The question that now confronts us is whether we are going to continue

along those lines or whether the events of the last few years are going to turn highway improvements into a laboratory for social experimentation. Are we going to regard highway improvement as a reservoir to absorb general unemployment? Are we going to consider it as a device to help us solve the problems that are imposed on the community by the periodic breakdown of our economic system; or are we going to resume the progress we have made and apply the technical lessons we have learned along the paths of progress that we had laid down and followed from 1900 to 1929? That is where we stand today. It will take all the intelligence, resourcefulness, courage, patience, and administrative genius of every man who has anything to do with highway improvement, if we are to solve that problem satisfactorily and conserve for our people the gains already won and yet to be achieved from the development of motor transportation.

To understand the reason for this it is necessary that we survey the present status of highway improvement, indicate the job yet to be done, and appraise the conditions that are going to influence the doing of that job.

One of the most striking facts of the present situation is the impression of the man on the street that our highways are substantially finished. Because we have gone so far in building up a highway system, and because we have accomplished so much in so short a time, many of our people think that the road building job now is finished and that they have but to think of maintenance and administration. During the last four years, many business men have suggested that we might economize in public spending by calling off for a few years our highway improvement program. Such a conception is based upon misinformation and misunderstanding; but, unfortunately, it is all too easy during these times to sell the man on the street the notion that by suspending highway improvement we might save some money without doing any damage.

FUTURE HIGHWAY DEVELOPMENT BASED ON ECONOMICS

It becomes evident, therefore, that one of our first tasks is to develop a wider understanding, even among ourselves, of highway transportation economics. We had just begun that job when the depression hit; we were just beginning to think of highway improvement in terms of transportation economics. We had graduated from the "Good Roads Era"; we had gone far with the scientific and technical side of highway improvement, and we had begun to study its economic aspects. But the need for this now is even more urgent, because of the demand for economy in public administration that has arisen out of the experience of the past few years. This means that we must get busy, all of us, on an intensive course in highway economics, if we are going to justify the appropriation

of funds we need to carry on and the continuance of the principles and practice we have developed from our highway experience.

We shall have to spend every dollar of highway money more wisely. That is not just a question of the number of miles of road we are going to get for that dollar; it involves also the question of what kind of roads and what kind of improvements. We must develop the science of highway economics with respect to routes, designs, materials, traffic maintenance, and all the other factors that are involved in the over-all cost of motor transport. We must learn how best to conserve the investment we have in our present highway system. When those who talk to us today about our now having a highway system, with nothing more to do but maintain it, we must be prepared to show them that no improvement of this nature is static. The essence of all industrial improvement is dynamic. That is especially true of a development that is so inherent a part of motor transport, which of all our national industries, with the possible exception of air transport, has been the most dynamic and progressive during the last 25 years.

A BALANCED EXTENSION PROGRAM

We have also with us the job of extending the highways in order that they may develop more traffic by serving more people. We must extend our mileage with a view to developing new traffic—making the right kind of highways accessible to more people—instead of planning to take care only of the demand already established. We have still a job of extension, although not the same kind of extension that prevailed between 1900 and 1925. We must extend mileage in the future, more with a view to developing additional traffic and thereby making more use of existing trunk routes. So we still have a real job of balanced extension as part of our program, but one that must take into account more consistently than ever the economic requirements of motor transportation and the economic methods by which to meet them.

MODERNIZATION OF HIGHWAYS

In addition to this we have the perennial job of modernizing and conserving our existing investment. What would we think of an industrial or a railroad management that decided that its facilities now are finished and that from now on it has only a maintenance and operating proposition? We know perfectly well that no force in industry is more inexorable than the gradual deterioration and obsolescence of capital facilities. One of the basic problems that confront every industrialist is the need for maintaining his capital investment at its full productive value. That is just as true of a public facility such as a highway system as it is of a private facility such as a fac-

tory or a railroad property. We have urgent need for continued rehabilitation and reconstruction and, if we are going to maintain these facilities at their original value, these requirements cannot be evaded.

The task of the highway administrator is not simply to lay down a certain number of miles of improved road and to leave it there. His job is to provide the necessary highway plant, so that the public can operate its motor transportation wherever and whenever it wants to go with the highest efficiency and safety. It is a matter of common observation that during the last ten or fifteen years the progress of motor transportation almost staggers the imagination. No one could have foreseen then what would happen. Many of the highways built at that time in accordance with the last word in design and construction technique now must be rebuilt and modernized, if we are to keep the highway plant up to date, equal to modern needs, and thereby conserve the investment of public money that already has been made in them.

DESIGNING HIGHWAYS FOR SAFETY

Another job that lies ahead of us is that of adapting highway design and construction to the requirements of greater highway safety. Three elements enter into highway safety: the car, the driver, and the track over which he must operate. It would be absurd to diminish the importance of doing the best possible job on both the driver and the car. Every highway administrator is anxious to help on these jobs and to lend his support to every rational measure that may be proposed to improve the standards of driving and to make our cars safer as vehicles.

But after all that is done, the designer and builder of the highways still has an important responsibility which he cannot pass on to anyone else. In saying this, I am mindful that some highway officials are inclined to take the defensive and to contend that they have built such fine highways that there is no chance for improvement there.

Let us admit that the roads they built ten or fifteen years ago may have been the finest that could have been built at that time. Let us assume that they had embodied every safety factor then known and that their roads were fully adequate for the demands of existing motor traffic. Does that mean that they still are? The men who built the first railroad did a fine job also, but the fast streamlined trains of today are not operating over the tracks they laid. As the railroads have had to meet new conditions of weight, speed, and traffic congestion, they constantly have improved their track and structures in the interests of greater safety to the traveling public, with results that reflect upon them the highest of credit.

Today the highway industry has a similar job. It must do

a lot of things to the highway, not alone to the new mileage that it is to build during the next five years, but also to the highways that have been built during the last ten years.

What, specifically, are some of these jobs? We need wider roads; we need to separate the traffic in opposing traffic lanes; we need better visibility, easier curves and grades, and adequate marking. In many stretches of main trunk highways, we need illumination that will make the highways as safe for travel at night as they are during the day. We need the elimination of grade crossings and the control of roadside uses. We need side parking places so that those who must stop may be able to pull out of traffic lanes. We need new technique for leading in side roads. Many others will occur to every thoughtful student of highway engineering.

When we read the statistics of highway fatalities, we must remember always that whether the blame be ascribed to the driver, to the speed, or to any other factor, there always is implied the phrase, "under the existing conditions." So while we seek to have cars designed to meet present highway conditions and while we seek to educate drivers to use good judgment under the existing highway conditions, we constantly should be at work to improve the conditions themselves, as one of the essential factors in over-all safety. That is the job of highway administration, and it must be done if we are to measure up to our responsibilities.

HIGHWAY FUNDS SHOULD NOT BE DIVERTED

I know it will be said at once that all of these activities require money and that public monies are not sufficiently available, for such purposes. The answer to that is that the money now is available if only we could limit its use to the purpose for which it originally was collected from the taxpayer. During the past few years, we have been dipping very heavily into our highway money in order to take care of relief and other forms of governmental expense. If we are going to do the job demanded by our development of motor transport, it is necessary that we cease this misappropriation of funds and get back to the fundamental principle upon which highway levies were based, i.e., that the only purpose of laying a special tax on motor transportation was to help defray the cost of building and maintaining the highways.

When gasoline taxes and highway registration fees are used for that purpose, they are a perfectly rational and equitable form of special taxation for a special service rendered. The gasoline tax is simply a highway usage meter for measuring the use of the highways based upon the amount of gasoline burned for a given speed or distance or weight. The motor registration fee is a readiness-to-serve charge levied upon the owner of the vehicle by his community. When used for these purposes, such special taxation is equitable and defensible.

But when that money is collected for this purpose and then used for the general purposes of the community—relief, support of fish hatcheries, schools, schools for sheriffs, and what not—when it is used for any other purpose than to improve the highways, what happens?

Consider, for example, a physician who uses his car to call on his patients. He may pay \$60 or \$75 a year or more as a gasoline tax. So long as that revenue is used to build and maintain the roads he uses, it is a sound practice. But down the street is a dentist who does not pay a cent of gasoline tax in connection with the practice of his profession. His patients come to his office. When the gasoline taxes collected from the physician are used for general purposes, the dentist, who derives just as much benefit from them as does anyone else, gets off scot-free from the payment of that tax.

Consider also the grocer who operates a delivery car. Next to him is a "cash-and-carry." The gasoline tax paid by the grocer is a service charge for the use of the highway and he expects to pay for it as such. But when the revenue from this tax is used for general purposes, including the benefit of the cash-and-carry competitor, it becomes a tax for general use levied only on a special group of taxpayers.

Consider also the farmer who lives one mile out of town and another who lives twenty miles away. The second man pays twenty times the gas tax of the first in connection with his necessary visits to town. Why? Simply because of the difference in the distance. If those revenues are used to improve the highways required by these two men, such a disparity in payment is fair and reasonable. But when those revenues are used for general purposes, in which the first man participates just as much as the second, they have absolutely no basis in reason or equity.

One of the first means, therefore, by which we can help to provide the funds necessary to maintain an adequate and necessary highway program, is to stop the diversion of highway revenues to other uses and to see that the money paid by highway users is employed exclusively for that purpose.

ECONOMIC IMPORTANCE OF MOTOR TRANSPORT

If we are going to have the support of our people for such highway programs, it is going to be necessary for us to do a substantial job of education. It is going to be necessary, for example, to establish in the public mind the identity of highway improvement with all the other departments of motor transportation. We must have our people see that these activities are part of the one picture. We must have the manufacturers and selling agencies of motor vehicles, the producers and processors of motor fuels and lubricants, the producers and dealers in rubber tires and every other accessory that goes into motor transportation, the operators of garages and

filling stations, and all the rest of them, appreciate that their business existence is predicated on an adequate and continuing program of highway development. They must see that once that base is weakened or allowed to crumble, the whole fabric of motor transportation begins to fall apart.

I should like to dwell on this, because it is so fundamental and because so few of our people see this picture. Will you in your imagination take a motor trip with me out of your city or town this morning? Let us start on any one of the highways. Every little distance we pass a filling station, where several men are employed; their families are dependent on them for a living. So are the families of the men who drive the tank trucks that supply them. Soon we come to a little village and pass a service station employing several men, with more people dependent on them for a living. Now and then we pass a truck or a bus, each driven by a man whose family is dependent on that job. There are hundreds of thousands of these throughout the land.

Soon we enter another city. There in show windows we see cars on display and behind them in the showrooms a number of men who earn their livings selling those cars and accessories to the citizens of that city and its environs. As we roll through town, we pass offices that house men and women who earn their living by writing insurance on those automobiles. At frequent intervals, we pass a variety of wayside stands, at which people are earning a living catering to the needs of passing motorists; many of these have found such employment as an alternative to going on the public relief doles during the last few years.

When we have traveled the length and breadth of your particular state in that spirit of observation, we begin to visualize thousands and thousands of our fellow citizens whose livelihoods depend upon motor transportation.

Observe that I am not now speaking of the engineers, contractors, equipment men, skilled and unskilled workers, who are employed in building and maintaining the highways and in manufacturing the materials and machinery used for that purpose. Throw them also into this picture and you begin to get an idea of how many of your fellow citizens depend for their livelihood upon motor transportation. And all that is true of the citizens not only of your state, but of all of these United States.

MOTOR TRANSPORT, A \$10,000,000,000 ENTERPRISE

Now, let us broaden our horizon a little. Let us go into Texas, Oklahoma, California, and other states, and see the hundreds of thousands of people employed in extracting petroleum from the earth. Let us watch the thousands more transporting it to the great plants in which it is refined by other thousands. Let us visit the men and women in Akron, and

elsewhere, who are producing tires; the thousands streaming in and out of the factories in the great automotive cities, who are producing cars; and elsewhere, the thousands who produce the materials, parts, and accessories that find their way into the assembly of those cars in those plants.

Now, let us integrate that picture, if you will, and see what part of our economy is dependent altogether on motor transportation for its existence. But before we do that, let us see clearly that this whole great pyramid of employment is built upon and is supported by the existence, maintenance, and continued development of an adequate highway system over which that motor transport may operate.

But just how important is all this in figures? The latest authoritative analysis to which I have had access shows that in 1930 the American people spent on individual motor transportation more than \$10,000,000,000, which was more than one-tenth of the national income. Now, remember that one man's expenditure makes another man's income. So we may say that one-tenth of the national income was derived from motor transportation.

Normally about 42,000,000 people are gainfully employed in this country. If we assemble all those that are engaged in some aspect of motor transportation, we have more than 4,200,000 people, or, again, one tenth of the gainful employment in this country which directly or indirectly depends on motor transportation over improved highways. In other words, however we look at it, more than one-tenth of our national economy is dependent upon highway improvement and the mode of transportation it makes possible.

SMALL BUSINESS BENEFITED

Mark this fact also. That one tenth probably represents in the aggregate, next to agriculture and along with construction, a stronghold of the small, independent business operation. When you recall the many opportunities opened up to the small individual operator by motor transportation, you must agree that in all its ramifications it remains one of the strongholds of the old-fashioned American idea of private, independent enterprise. Yet, in spite of the fact that it includes so many small operators, it constitutes in the aggregate one tenth of our total national economy.

Doesn't it look as though the welfare of so large a number of people is worth our concern? Doesn't it look as though a major public concern should be a continuation of an adequate program of highway improvement? I am profoundly convinced that no other dollar of public money ever spent in this country has returned so richly on the investment as the money that has been put into our improved highways. I am not now referring to what it may have contributed to the American social development or standard of living. I am not referring

to the social and educational values. I am not referring in any way to the intangibles that constitute the larger part of the public wealth. I am talking about the tangible cash return to private business and private employment. I am talking about the employment of labor and capital in private enterprise and the wages, salaries, and business profits derived from them. I am talking of those very tangibles by which all of us measure business and economic values.

One of our most important jobs, therefore, is to develop an understanding on the part of everyone concerned that the highways and motor transport are vital factors in the business, as well as in the social life of the American people.

HIGHWAY ADMINISTRATION SHOULD BE IN THE HANDS OF SKILLED PERSONNEL

That is why it is so important that the selection of highway projects and their design and supervision must not be turned over to those primarily concerned with social welfare and relief. They must be put into the hands and kept in the hands of those who have been educated and trained to get the most highway for the taxpayer's dollar that it is possible to get. That is why a free hand in the administration of all the money that is to be spent on the streets and highways is essential.

The same considerations apply to the actual construction process. Over the last quarter-century, we have developed in this country a corps of contractors who have brought the technique of highway improvement to a high stage of efficiency. They represent a vast investment of capital, time, and labor. They embody the accumulated experience and skill of many road builders, each working under a variety of conditions and under the spur of competition. We should use the contract system on our highway improvement, thereby utilizing that experience and skill in the largest possible degree, rather than rely more extensively on non-competitive day labor. Competitive contract is the demonstrated path of wisdom and economy in the expenditure of the highway funds.

That is the only way, also, by which those great industries that have developed highway materials and machinery can be kept at work improving and modernizing their products so that we may be able to build highways even more efficiently and more economically, so that we may be able to build better highways for the same money in the years to come.

In other words, we must keep highway improvement on an economic basis, where the concern of everyone involved is to produce the greatest mileage of the best possible highways at the lowest cost for the people that are paying for them, rather than create the largest number of jobs for the largest possible number of job holders with whatever money may be available.

Thus only can we continue to produce highways that will be better and better, and thus only can we provide for our people a highway plant that will be so much better than we were able to build ten or fifteen years ago that our people running their cars over their highways will continue to save in operating costs the interest on the investment they have made. Therefore, when we work for a restoration of normal highway administration and modern highway technique, we are conserving the interests of the highway user, of every individual whose business or whose job is dependent on motor transport, and of the general taxpaying community whose welfare today is so dependent on the convenient and efficient circulation of motor transport over the highways and in the cities of the land.

HIGHWAY ADMINISTRATORS MUST BE SUPPORTED

This is the problem that lies before us, and these are some of the tasks that make that problem so urgent. I am not discouraged by the magnitude or complexity of this problem, or by the challenge it offers to us. Today we are making real progress with it. More and more are our people beginning to understand that road building is a technical and economic function, rather than a welfare expedient. They are learning that the cost of owning and operating an automobile depends very directly on the type and condition of the highways over which they operate it. They are learning that congestion caused by inadequate highways, with all of its loss in time and energy, is a heavy toll upon their pocketbooks. They are learning that safety in motoring is as much dependent on the highway design as it is on the car builder's genius or their own care. They are learning that their motor and gas taxes always have been intended to provide for them the kind of highways they need, and that there is no reasonable or moral justification for using those taxes for other purposes. Indeed, in some states, the people already have written amendments into their state constitutions forbidding hereafter such a perversion of their highway revenues.

This is the trend, but this trend still has far to go before those who are responsible for the administration of our highways will have the general understanding and public support that they need to do their work. Several agencies and organizations are set up and working today to help with this job. The American Road Builders' Association is but one of them. Broad in its scope as the field itself, it makes every effort to enlist in behalf of its work all those who, because of experience or special understanding, can be of help. Through its national staff, through its publications and conventions, through its exhibitions of road building materials and equipment, through its state chapters and affiliated groups, it is devoted wholly to the task of conserving the interests of motor

transportation, so far as highway improvement can do it. To this task it pledges its best efforts and consistent attention. For its more effective performance, it seeks the endorsement and support of every individual and every group that may share in the same responsibility for progress in motor transportation.

REPORT ON INDIANA HIGHWAY PLANNING SURVEY

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During the session of the 79th General Assembly two years ago a joint resolution of the House and Senate was passed creating the Indiana Highway Survey Commission; its charge was that it "shall make, or cause to be made, a scientific study and survey of the traffic needs and requirements of this state, shall investigate the desirability or necessity for widening the roads in congested areas, for highway and railway grade separation, for the repair, construction or maintenance of existing highways, and shall formulate a complete highway building and maintenance program for this state, and shall make recommendations relative to the means of financing the same. The Commission shall make a thorough study of the engineering, economic and practical problems involved and shall submit a report embodying their recommendations and program to the 80th General Assembly."

The Commission consisted of three members of the Senate, five members of the House, three citizens at large and two ex-officio members—the chairman of the State Planning Board and the chief engineer of the State Highway Commission.

Shortly before the organization meeting of the Commission on September 3, 1935, a communication was received from the chief of the Bureau of Public Roads to the effect that in the near future rural highway surveys would in all probability be undertaken by the Bureau of Public Roads through the several states.

At its organization meeting, the Commission requested the State Highway Commission to secure the advice and co-operation of the Bureau of Public Roads in obtaining the data required in the report for the Legislature and to co-operate with the Highway Survey Commission in making the survey.

In this letter from the chief of the Bureau of Public Roads were outlined briefly the proposed requirements for a comprehensive rural highway survey. The actual work of the Legislative Commission was commenced about December 1, 1935; and the elements of the survey as outlined in the Bureau letter were followed with respect to the inventory until the Bureau assigned its representative to Indiana about the first of May, 1936.